This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims</u>:

1. (Previously Presented) A computer-implemented method of debugging an object-oriented computer program, the method comprising:

    (a) in response to user input, setting an inheritance breakpoint that is associated with a first program entity in the object-oriented computer program and a method identified in the first program entity; and

    (b) halting execution of the object-oriented computer program during debugging in response to reaching an implementation of the method defined in a second program entity in the object-oriented computer program that is different from and that depends from the first program entity.

2. (Original) The computer-implemented method of claim 1, wherein the first program entity is an interface that identifies the method, and wherein the second program entity is a class that implements the method.

3. (Original) The computer-implemented method of claim 1, wherein the first program entity is a first class that includes a second implementation of the method, wherein the second program entity is a second class that inherits from the first class, and wherein the first implementation of the method in the second class overrides the second implementation of the method in the first class.

4. (Original) The computer-implemented method of claim 3, wherein the second class is a subclass of the first class.

5. (Original) The computer-implemented method of claim 1, wherein the first program entity is an abstract class that identifies the method, and wherein the second program entity is a non-abstract class that implements the method.

6. (Canceled).

7. (Previously Presented) The computer-implemented method of claim 1, wherein setting the inheritance breakpoint includes storing in a breakpoint data structure an entry that identifies the first program entity and the method.

8. (Original) The computer-implemented method of claim 1, further comprising, during loading of a class in the object-oriented computer program, identifying each implementation of the method in the class and setting a breakpoint on such implementation, wherein halting execution of the object-oriented computer program during debugging in response to reaching the implementation of the method includes reaching a breakpoint set on such implementation.

9. (Original) The computer-implemented method of claim 1, further comprising setting a breakpoint on each implementation of the method, wherein halting execution of the object-oriented computer program during debugging in response to reaching the implementation of the method includes reaching a breakpoint set on such implementation.

10. (Original) The computer-implemented method of claim 9, wherein setting a breakpoint on each implementation of the method includes setting a breakpoint on a first statement in an implementation of the method.

11. (Original) The computer-implemented method of claim 9, wherein setting a breakpoint on each implementation of the method includes setting a breakpoint on a method call to an implementation of the method.

12. (Original) The computer-implemented method of claim 1, wherein setting the inheritance breakpoint includes associating a user-specified condition with the inheritance breakpoint, and wherein halting execution of the object-oriented computer program during debugging in response to reaching the implementation of the method is performed only if the user-specified condition has been met.

13. (Original) A computer-implemented method of debugging an object-oriented computer program, the method comprising:

(a) in response to user input, setting an inheritance breakpoint that is associated with a first class in the object-oriented computer program in which is identified a method; and

(b) halting execution of the object-oriented computer program during debugging in response to reaching an implementation of the method defined in a second class in the object-oriented computer program that inherits from the first class.

14. (Original) A computer-implemented method of debugging an object-oriented computer program, the method comprising:

(a) in response to user input, setting an inheritance breakpoint that is associated with an interface in the object-oriented computer program in which is identified a method; and

(b) halting execution of the object-oriented computer program during debugging in response to reaching an implementation of the method defined in a class in the object-oriented computer program that implements the interface.

15. (Previously Presented) A computer-implemented method of debugging an object-oriented computer program, the method comprising:

(a) receiving user input to halt program execution during debugging in response to reaching any of a plurality of implementations of a method in an object-oriented computer program, wherein the user input to halt program execution includes user input to set an inheritance breakpoint on the method, wherein the inheritance breakpoint is associated with a first program entity, and wherein at least one of the plurality of implementations of the method is defined in a second program entity that depends from the first program entity; and

(b) thereafter setting a breakpoint for at least a subset of the plurality of implementations including the implementation defined in the second program entity

such that execution of the object-oriented computer program will be halted in response to reaching any of the implementations on which a breakpoint has been set.

16. (Canceled).

17. (Original) The computer-implemented method of claim 15, wherein setting the breakpoint includes, during loading of a class in the object-oriented computer program, identifying each implementation of the method in the class and setting a breakpoint on such implementation.

18.-30. (Canceled).